



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

in color appears, depending jointly on their light-richness and their "warmth;" but by the third year the warm colors in some cases lose their advantage, and the cold ones may give as much pleasure. But for color *harmony* no feeling is to be found in the little child."

In this chapter the various space concepts of form, distance, size, direction, locality and solidity, and the child's understanding of pictures are also discussed.

Discrimination in hearing, musical sensibility, sense of rhythm, spontaneous musical expression, and other allied topics, each receive due consideration in the chapter on hearing; touch and the minor dermal senses, taste, smell, muscular, organic, and general sensations are all included among the topics discussed in Part III and the recapitulation of this section, which does not lend itself well to tabulation, is given in 6 month periods, making it exceedingly convenient for reference.

Part IV gives the pedagogical results. These have been foreshadowed by the previous chapters and may be very briefly summarized as follows. In the earliest stage of development, that which comes before grasping, the human presence seems to be the one thing of educational value. As the baby's powers develop the line must be carefully drawn between neglecting to provide necessary stimulus and the danger of overstimulation. In general, the largest possibility of free action is the secret of wholesome and happy development. During the first three years it is in only a slight degree that any formal education can be begun and yet in this period certain psychological foundations for the future may be laid, and a few simple but valuable suggestions are given illustrative of the general principles of such informal instruction.

As a whole the book represents an amount of scientific work and thoroughness that place it in the front rank of psychological investigation.

THEODATE L. SMITH.

*Ueber Lesen und Rezitieren in ihren Beziehungen zum Gedächtniss*, von L. WITASEK. Zeitschr. f. Psychol. u. Physiol. d. Sin., 44 Bd., 1907, pp. 161-185, 246-282.

Groups of ten nonsense syllables were presented visually at the rate of one syllable per second to seven adult observers, who read them aloud in trochaic rhythm. In reciting a group from memory the observer was given the first syllable, and he attempted to recite the remainder in the same rhythm and at the same rate used in the presentation. In case of failure to recall a given syllable, ten seconds were allowed, and then the correct syllable was given him, with the repetition of which he continued the recitation. Designating the number of successive readings in the presentation of a group by Roman numerals, and the number of successive recitations by Arabic gives the following twelve series of different combinations of readings and recitations that were used.

VI+0	VI+5	VI+10	VI+15
XI+0	XI+5	XI+10	XI+15
XVI+0	XVI+5	XVI+10	
XXI+0			

An hour after giving a series it was re-learned through recitations alone, carried out in the same manner as before and repeated to a point where the observer recited the group in ten seconds without error. We may call these the *re-learning*, and the former the *learning* recitations. The degree of memory induced at any point was measured by the time taken to recite, and by the number of forgotten syllables or number of times aid was required in a recitation.

In agreement with results of previous investigations the author found that the impression value (effectiveness for memory) of successive readings decreased very rapidly, this holding true in both the learning and the re-learning recitations. The impression value of successive recitations decreased quite in the same manner. The impression value of a recitation in inducing immediate memory as compared with that of reading far exceeded the latter in all cases. It was greater after the hour's interval when the initial degree of impression already present had been obtained by reading and recitation instead of by reading alone. Likewise, the memory permanency, as measured by the first recitation alone after the hour's interval, was greater for the series that included recitation with the reading. The combination of readings and recitations that resulted in the quickest re-learning showed a complex order, from which the following conclusion is drawn: (1) The optimum total time for reading equals about one-fourth of the total time spent on reading and recitation together. (2) The optimum division of the total time spent for recitation between learning recitation and re-learning recitation is one that gives less than half to the former.

The figures on which these generalizations are based are in most cases derived in several different ways, the possibility of which may be seen from the nature of the series that were given.

F. KUHLMANN.

*Expériences sur le rôle de la récitation comme facteur de la mémorisation*, par M. DIMITRE KATZAROFF. Archives de Psychologie, 1908. pp. 225-258.

Couplets of nonsense syllables, eight to ten in a group, were presented visually at the rate of one couplet per two seconds to six adult observers, who read the syllables aloud in trochaic rhythm. The presentation of a group was combined with recitations in which the first syllable of a couplet was presented visually, while the observer tried to recall the other, and failing to do so was given the term orally. The final recall, in which the first term of a couplet was again presented as in a recitation, followed 24, 48, or 72 hours after the learning. Using Roman numerals to designate the number of consecutive presentations and Arabic figures for the number of recitations, gives the following combinations, with the intervals before recall, that were employed:

Combinations

A	B	C	D	E
X+I+V	VIII+VII	VIII+VII	IV+VI	IV+VI
X+I+5	VIII+7	VIII+I+VI	IV+6	IV+3+III
			IV+I+I+I+I+I+I	IV+I+I+I+I+I+I
Intervals				
48h.	72h.	72h.	24h.	24h.

The degree of memory induced in the different series was measured by the number of terms recalled, and by the time taken to recall one. Thus measured, the author found that the fixation value of a recitation is greater in all cases than that of a presentation. Syllables that were recalled in the first recitation after the first group of presentations (four to ten) were remembered best, in the final recall, when the relative number of subsequent recitations was greatest. This held true also for syllables that were not recalled in the first recitation, but were recalled in the later ones. The number of syllables recalled in the first recitation but forgotten in the final recall, was greater than the number not recalled in the first recitation, but learned later and remembered in the final recall. This is explained by assuming that the first recitation in a